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ABSTRACT

The purpose of this Child Development Associate (CDA) training module is to provide the CDA intern with knowledge of how to use nutrition information with children and parents, as well as how to structure and carry out a nutrition program, including mealtime and food preparation activities. Objectives are presented along with suggested activities for achieving each objective and an assessment checklist. Also provided is a study guide emphasizing basic nutrition, special needs of the preschool child: social, psychological, cultural, and religious reasons for eating, mealtime experiences; and a food preparation program. Resources for further study and supplemental materials are also provided. (Author/MP)

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Competency Based Training Module #15

NUTRITION IN THE EARLY CHILDHOOD SETTING

by

Ann Terrell

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NOTE TO THE INTERN:

This CDA training module has been prepared as a guide for you and your CDA Advisor to help you to develop certain practical skills necessary for your work in an early childhood center. Although it contains many useful ideas, it is not intended to be a self-study program. Many decisions about your training experiences are left up to you and your CDA Advisor. The activities given in this module are "suggested" activities, and should be used if they are appropriate to your learning needs. You or your Advisor may come up with other activities more appropriate for your particular situation, children, or background of experience and training.

Your Advisor will evaluate your performance in each of the objectives. S/he may do so right away on the basis of skills you already have, or s/he may evaluate you after you have done some learning activities, or both. If you think you already have the skills required by some of the objectives, you should ask to be evaluated right away. You may not have to do any activities for some of the objectives. You do, however, have to demonstrate the required skills for your advisor; you cannot just tell s/him that you have the skills. If your advisor has already observed some of the skills before you entered this module, s/he may check you off on those skills without further observation.

When your Advisor has evaluated your performance in an objective area as satisfactory, s/he will initial and date that objective as completed in your copy of this module. When all of the objectives have been initialled, you have completed the requirements of this module and have earned credit. Keep this module as your permanent record of completion, and as a reference to use in your classroom.

As you can see, how fast you are able to complete this module depends on a lot of things: how much time and effort you can put into it; how much help your Advisor can give you; how much experience and training you have already had.

The Arizona HSST/CDA program hopes that you find your participation in CDA a valuable and practical training experience. We would appreciate any suggestions you may have for improvements in the training program and in this module.

NUTRITION IN THE EARLY CHILDHOOD SETTING

CDA TRAINING MODULE #15

By Anne Terrell
Edited by Warren Miller

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This module relates to the following CDA Competencies:*

B. ADVANCE PHYSICAL AND INTELLECTUAL COMPETENCE
(see items 1, 3, and 7)

C. BUILD POSITIVE SELF-CONCEPT AND INDIVIDUAL STRENGTH
(see item 7)

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* for reference, see the Arizona HSST/CDA "CDA Assessment"

NUTRITION IN THE EARLY CHILDHOOD SETTING

INTRODUCTION

Nutrition is an important part of the program of any early childhood center. A child must be well nourished to be happy, healthy, alert and eager to learn. The immediate objective of a center's nutrition program is to provide foods for adequate nutrition for the children while they are at the center. This means that each child must be studied to determine if he/she has any special nutritional needs. To carry out this objective, all of the center's staff need to have a basic understanding of nutrition. It is important for them to know why food is eaten, and know about the different nutrients found in different foods. Preschool children have nutritional needs which are different from those of older children, or those of adults, and the staff must also be aware of these. With this knowledge, staff members can help to see that the children receive adequate nutrition by leading the children to develop good eating habits and attitudes toward food, and by sharing their nutrition knowledge with parents.

In addition to providing for the children's nutritional needs for the time they are at the center, the nutrition program also:

1. Builds self-concept through recognition and serving of cultural and ethnic foods, by allowing the children to make choices of foods and decisions about the quantities of food taken, and by allowing the children to serve their own food.

2. Introduces a wide variety of unfamiliar and nutritious foods and encourages children to try new foods.

3. Demonstrates that mealtime can be a pleasurable and enjoyable social experience.

4. Provides learning experiences through participation in mealtime activities (setting the table, preparing food, cleaning up, serving food, etc.).

5. Develops muscle coordination by allowing the child to serve himself (family style), pour milk, prepare foods.

6. Uses foods to teach cognitive concepts in the educational program (language, color, texture, shape, number).

7. Provides opportunities for parents to learn about nutrition by participating in classroom nutrition activities.

This module will help the CDA intern learn about nutrition, how to use nutrition information in the classroom and with parents, and how to structure and carry out the educational aspects of the nutrition program, including mealtime and food preparation activities.

OBJECTIVES, ACTIVITIES, ASSESSMENT

CDA Intern's Name_____

Date of Entry_____Date of Completion_____

OBJECTIVES	SUGGESTED ACTIVITIES
1. The intern will demonstrate knowledge of, and ability to use basic nutrition principles, and the ability to teach appropriate nutrition concepts to children.	1. Read Section I of the Study Guide. a. Discuss the Nutrition questions in Supplement #1 with your advisor. b. With your advisor plan three days' menus using the meal pattern in the Study Guide (Section I - E). c. From a magazine, cut pictures of foods from each of the food groups and others not in a food group. Sort these into groups and discuss nutrients found in each group. d. Involve children in making posters or scrapbooks of each of the four food groups. Point out different foods that may go into the groups. Point out at least one function of nutrients from each group. 1) Milk - Calcium for bone and teeth growth. 2) Meat - Protein for muscle growth. 3) Bread - Carbohydrates for energy. 4) Fruits and Vegetables - Vitamin A and C for healthy gums and eyes.
ASSESSMENT _____ date/initial	
2. The intern will demonstrate an awareness of the special nutrition needs of the pre-school child.	2. Read Section II of the Study Guide. a. Discuss the following topics with your advisor: 1) Nutrient needs for growth of pre-school children: a) protein b) calcium c) calories d) other nutrients
ASSESSMENT _____ date/initial	

OBJECTIVES	SUGGESTED ACTIVITIES
	2) Rate of growth of 4 to 6 year olds compared with 1 to 3 year olds. 3) If there is a child in the classroom that has an unusual eating behavior, (see Section II - B of the Study Guide) discuss how to deal with it. 4) If there is a child with a feeding problem in the classroom, discuss how he compares with the normal development discussed in Section II - C of the Study Guide. How can you help this child? b. Are there children in the classroom who may not be getting enough food for growth? (See Objective #8)
3. The intern will demonstrate an awareness of cultural, social, religious, and psychological uses and meanings of food. ASSESSMENT _____ date/initial	3. Read Section III of the Study Guide. a. Discuss the following topics with your advisor: 1) Why do people eat? 2) Your feelings about a culturally important food such as mutton, tortillas, corn bread, Navajo or Hopi wedding cake, tamales, or hamburgers. 3) What culturally important foods have the children in your center eaten? Have you tried serving them foods from cultures other than their own? b. Organize a birthday party, holiday occasion, or cultural experience using food. Discuss what the children experienced.
4. The intern will plan and conduct mealtimes in the center in a way that meets the developmental and social needs of children. ASSESSMENT _____ date/initial	4. Read Section IV of the Study Guide. a. Evaluate current meal and snack time procedures using the Checklist in Supplement #2. b. After organizing and conducting a mealtime, review the Checklist in Supplement #2 and evaluate yourself. c. Record the childrens' conversation during mealtime; later review the tape to find ways to improve and expand your role in promoting conversational interaction.

OBJECTIVES	SUGGESTED ACTIVITIES
	d. Make a plan to give each child a turn in exercising responsibility for pre-meal activities.
	e. View the film "Jenny Is A Good Thing" and compare it to the Checklist in Supplement #2.
	f. Talk to the children about how their families have meals.
5. The intern will develop, and involve children in, a program of food preparation experiences based on developmental principles.	5. Read Section V of the Study Guide.
	a. Discuss with your advisor the objectives of a food preparation program for preschool children.
ASSESSMENT	b. Plan a food preparation program based on activities from the card file and/or from other sources. Supplement #3 may serve as a guide, or sample program.
_____ date/initial	c. View the filmstrip "Children Can Cook" and compare the ideas with what has been done in your classroom.
	d. Develop three activity cards for cooking experiences. (See Supplement #3 for a sample card.)
	e. Invite parents to participate in food preparation experiences.
	f. After a food preparation activity, review the Checklist for Food Preparation Experiences - Supplement #4.
6. The intern will use nutrition related activities in other curriculum areas.	6. a. Plan activities related to the introduction of a new food including the language skills, number and science concepts to be stressed. (See card file for sample activities.)
ASSESSMENT	b. Plan and carry out a nutrition related field trip or tasting party.
_____ date/initial	c. Involve children in making a scrapbook on daily activities. (My Own Book - pictures or drawings of food and eating activities).
	d. Invite parents to demonstrate cultural recipes on a culture exchange day to each other and to the children.
	e. Use sensory experiences with food to teach concepts of color, texture, odor, taste, size, etc. (See card file for sample activities.)

OBJECTIVES	SUGGESTED ACTIVITIES
	f. Involve children in making a poster on foods using the four food group design. g. Involve children in a dramatic play situation related to food, i.e. grocery store, growing food, etc. h. Involve children in singing songs about food. i. Involve children in finger plays about food. j. Write to the Dairy Council or other source for materials like Food Models or picture sets (We Like Milk series), to use in various activities.
7. The intern will share his/her knowledge of the nutrition program with parents and the community.	7. Read the partial Headstart Performance Standards for Nutrition - Supplement #5. a. Role-play an explanation of Headstart Performance Standards for Nutrition with the Nutrition Coordinator or your advisor. Points to bring out include: 1) The role of cultural or ethnic foods in the nutrition program. 2) What are the objectives of the nutrition program? 3) What part of the day's nutrient needs should the Headstart Program provide based on hours at the center? 4) What is the suggested meal pattern? 5) Who is involved in meal preparation? 6) Why should parents be involved in the nutrition program in activities like menu planning, mealtime, education sessions, cooking activities? 7) What activities are children doing to learn about food? b. Plan an oral or written explanation of the nutrition program for presentation. c. Organize a session with parents to prepare a nutritious snack food that parents can make at home.
ASSESSMENT _____ date/initial	

OBJECTIVES	SUGGESTED ACTIVITIES
8. The intern will communicate with the parents and all the center staff about the child's growth and eating habits while at the center.	8. a. Take heights and weights of children according to the outline in Supplement #6. Use the growth standards for screening to determine possible problems. Any children who seem to have problems should be referred to the nutritionist, Public Health Nurse, Public Health Service, or physician.
ASSESSMENT	b. Have the children trace the outlines of their bodies and discuss differences in size. This can be repeated near the end of the year and comparisons in size made. Point out the differences in body size between children of different ages.
_____ date/initial	c. Make notes in the individual child's records about progress in acceptance of new foods, changes in eating habits, ability to feed himself, use of utensils, socialization during mealtime, participation in mealtime and food related activities, etc.
	d. Discuss with the parents the child's growth and progress or change in eating habits.

NUTRITION IN THE EARLY CHILDHOOD SETTING

STUDY GUIDE

I. Basic Nutrition

A. Food is what you eat, nutrition is how your body uses food. All people need food for life. Food affects your health and well-being, gives you energy for things you do, affects your height and weight and even your strength to a great extent. Foods contain nutrients like protein, carbohydrates, fats, vitamins, minerals, and water. These substances nourish your body. In other words, "You are what you eat." All foods contain some nutrients but some foods contain more nutrients than others. It is important to remember that no one food does everything and all foods have something to offer. A variety of different types of foods will provide all the nutrients most of us need.

B. The Major Nutrients and Where to Find Them. (An arrow → is used to indicate the primary function of each nutrient.)

1. Protein. This is one of the most plentiful substances in the body. Protein is used to build the muscle tissue which holds the bone structure together and provides the strength to move and work. Protein is part of the hemoglobin molecule in the red blood cells that carries oxygen thoughout the body. It is a part of the substances, called enzymes, which control the processes that keep the body working. The antibodies in the blood stream that fight off disease and infection are also protein.

→ Proteins are used in the body to build and repair tissues and to regulate body processes.

Where is protein found?

Meat, poultry, fish, milk, cheese, eggs, dried beans and peas (pinto beans, garbanzos, black eyed peas), and peanut butter provide good amounts of it. Bread and cereal are also important sources. You do not have to eat a lot of meat or protein from animal sources to get enough protein in your diet.

Combining cereal or vegetable foods like beans or peanut butter with a little milk or cheese or other animal protein can provide good protein in your diet. For example, eat cereal with milk, rice with fish, beans with tortilla or rice, or beans with cheese or milk. All these combinations provide the high quality protein needed by the body.

2. Fats. Fats provide energy and add flavor and variety to foods. They carry Vitamins A, D, E, K, and are essential parts of the structure of the cells which make up the body's tissue.

→ Fats provide energy.

Where are fats found?

Margarine, liquid vegetable oils, shortening, butter, cream, most cheeses, mayonnaise, avacado, salad dressing, nuts, bacon, and meats provide fat.

3. Carbohydrates. They are sugars and starches found in food. Carbohydrate foods often carry vitamins and minerals.

→ Carbohydrates are the major source of energy in the diet.

Where are carbohydrates found?

Complex carbohydrates or starches are found in cereal grains (wheat, oats, corn, rice) and foods made from them like bread, spaghetti, macaroni, tortillas, noodles, or grits, potatoes, sweet potatoes, and vegetables like peas, dry beans, peanuts, and soybeans. Most of the other vegetables contain smaller amounts of carbohydrates. All fruits (melons, oranges, apples, pears, plums, cherries, bananas) contain simple carbohydrates as sugars. Candies, jams, jellies, molasses, and syrups contain mostly sugars.

4. Water. Water is essential to life. Without water, a person can live only a few days. Nutrients are dissolved in water so they can pass through the intestinal wall and into the bloodstream. Water carries waste products out of the body and helps regulate body temperature.

→ Water helps regulate body processes.

Where is water found?

The most obvious source is the water a person drinks. Some water is produced by the body's burning of food for energy. Coffee, tea, fruit juices, soup, and milk are mostly water. Many fruits and vegetables are a source of water.

5. Minerals. There are many minerals that are essential to life and growth. The main ones are calcium, iron, iodine, zinc, copper, sodium, potassium, magnesium, and phosphorus. All of these except calcium, iron, and iodine are found in so many foods that a little variety in food choices takes care of them easily.

→ Minerals are used in the body to build and repair and to regulate body processes.

a. Calcium is the most abundant mineral in the body. Except for iron, it is the most likely to be lacking in the diets of many age groups. Almost all calcium is in bones and teeth. Calcium also is required for blood to clot and for the heart to function normally. The nervous system does not work properly when calcium levels in the blood are below normal.

Where is calcium found?

Milk, cheese, yogurt, products made from milk provide major sources of calcium. It is also found in dark leafy green vegetables like collards, mustard greens, turnip greens, or spinach. Cholla buds supply calcium. Salmon and sardines supply useful amounts of it if the very tiny bones are eaten.

b. Iron is another essential mineral. The diets of adult women, infants, teenage girls and pregnant women may need special attention to insure that enough iron is included. Iron is used as part of the hemoglobin molecule in red blood cells to carry oxygen throughout the body. It is also used to build new tissue and as a part of most cells.

Where is iron found?

Iron is found in all red meats, especially liver, heart, and kidney. It is also found in pinto beans, dark leafy vegetables, whole grain and enriched breads and cereals.

c. Iodine is a mineral used in the thyroid gland in the neck. Too little iodine can cause goiter or swelling of the neck. The most practical ways of getting enough iodine are to use iodized salt (look on the label) and add seafood to the diet when possible.

6. Vitamins. A vitamin is a substance found in food that is necessary to be healthy. There are a dozen or more vitamins that are needed for health. Usually, you can get them all in a well chosen diet.

→ Vitamins help regulate body processes.

a. Vitamin A. This vitamin is often missing in the diets of people of the Southwest. It is used in the eye to see at night, in keeping the skin and mucous membranes free from infection.

Where is Vitamin A found?

Vitamin A occurs only in foods of animal origin like liver, lean red meats, and kidney. Carotene - a substance found in deep yellow vegetables and dark green vegetables - is turned into Vitamin A by the body. Fruits and vegetables like collards, turnip greens, kale, carrots, squash, sweet potatoes, peaches, apricots, canteloupe, and papayas can provide all of the Vitamin A you need. Whole milk, cheese made from whole milk and margarine enriched with Vitamin A can provide this vitamin.

b. The B Vitamins. These vitamins release the energy in food. They have a role in the nervous system, keep the digestive system working calmly, and help maintain a healthy skin.

Where are B Vitamins found?

B Vitamins are found in meat, milk, whole grain and enriched breads and cereals, liver, kidney, pork, dry beans and peas, and some nuts. Most B Vitamins are easily found in adequate amounts in a varied diet.

c. Vitamin C. Also called ascorbic acid. It is important to maintain the cementing material that holds body cells together. It helps keep the gums and skin healthy.

Where is Vitamin C found?

One serving of citrus fruit like oranges or grapefruit can supply over half of the Vitamin C you need in a day. Canteloupe, watermelon, potatoes, sweet potatoes, tomatoes, bell peppers, chili peppers, broccoli, turnip greens, and raw cabbage also contain good amounts of the vitamin.

d. Vitamin D. Vitamin D is important in building strong bones and teeth. It is needed for growth in children. Without it the body cannot absorb and use calcium. Too little Vitamin D in children can cause ricketts, a disease where bones do not form properly. Too much Vitamin D (usually from vitamin pills with large dosages) causes calcium to build up in the muscles, kidneys, and other organs.

Where does Vitamin D come from?

Vitamin D can be found in milk that has been fortified with it. It is also produced in the body when sunlight is allowed to reach the skin. Most people in the Southwest have enough Vitamin D in their bodies.

e. Vitamin E. This vitamin is known to be necessary in the body but the exact role that it plays in health is not completely understood.

Where is Vitamin E found?

This vitamin is found in vegetable oils, margarine, wheat germ, lettuce. If a diet regularly includes fruits, vegetables, vegetable oil, milk, meat, and eggs it is not lacking in Vitamin E.

f. Vitamin K. This vitamin is used to help the blood to clot.

Where is Vitamin K found?

Vitamin K is widely distributed in a variety of foods like green and leafy vegetables, tomatoes, cauliflower, egg yolks, soybean oil, and liver.

C. Nutrients and Energy

1. Almost all foods provide energy to the body. Energy is measured in calories. Foods like fat, sugar and starches contain a lot of energy. Foods like watermelon or cucumbers which contain a lot of water do not have many calories.

2. Fats are the most concentrated source of energy and provide more than twice as much energy as proteins or carbohydrates.

3. When you eat a diet that supplies more energy - or calories - than you need, the excess supply is stored in the body as fat. When you continue to eat too much you become overweight or fat. When you eat less calories than the body uses, you lose weight.

D. The 4 Food Groups

1. It would be very complicated if people had to worry about all of the nutrients mentioned above. Therefore scientists have developed a simple method of looking at food to determine whether or not your diet is adequate. This method is called the 4 Food Groups.

2. Foods have been divided into 4 main groups. Each of these groups contains nutrients found in good supply. The groups are:

FOOD GROUPS	MAJOR NUTRIENTS SUPPLIED:
MILK GROUP:	
Milk (whole, skim, buttermilk), all cheese, ice cream, yogurt, foods made from milk.	Protein, Calcium, B Vitamins
MEAT GROUP:	
Lean meat, fish, poultry, seafood, peanuts, nuts, peanut butter, pinto beans, garbanzo beans, soybeans, etc.	Protein, Iron, Fat
FRUIT AND VEGETABLE GROUP:	
Citrus fruit, melons, peaches, pears, plums, cherries, bananas, and others. Tomatoes, carrots, squash, potatoes, dark leafy vegetables, spinach, cabbage, turnips, and others.	Vitamins A and C
BREAD AND CEREAL GROUP:	
All breads and cereals that are whole grain or enriched, cooked cereals, flour, grits, macaroni, spaghetti, noodles, rice, rolled oats, other baked goods.	Carbohydrates, Iron, B Vitamins

3. Other Foods: These include sugar, candy, soda pop, jams, jellies margarine, butter, vegetable oils, lard, and other fats. These foods do not supply nutrients in good amounts. They may be used in a diet with a variety of foods to supply energy, flavor, variety. An excess of these foods is not good because they do not contain many nutrients and are often eaten instead of foods that supply important nutrients.

4. How much of each of these foods is needed daily to be healthy?

Milk Group: This would be whole milk, skim milk, buttermilk.

Preschool: 2-3 cups

Teenage: 4 cups

Adults: 2 cups

Other milk foods may be used in the following amounts:

1 inch cube cheddar type cheese = 1/2 cup milk

1/2 cup yogurt = 1/2 cup milk

1/2 cup cottage cheese = 1/3 cup milk

1/2 cup ice cream = 1/3 cup milk

Meat Group: Preschool serving = 1½ - 2 oz. Teenage and adult serving = 2-3 oz.

Preschool: 2 servings

Teenage: 2 servings

Adult: 2 servings

Vegetable and Fruit Group: Serving size is 1 piece of fruit or ¼ - ½ cup juice

Preschool: 4 or more servings

Teenage: 4 or more servings

Adult: 4 or more servings

Bread and Cereal Group: Serving size is ¼ - ½ cup or ½ - 1 piece of bread.

Preschool: 4 or more servings

Teenage: 4 or more servings

Adult: 4 or more servings

E. The Headstart Performance Standards may be used as a guide for menu planning. The following meal pattern and suggested serving sizes are from the Performance Standards:

1. Meal Patterns (Programs on Special Food Service Program (SFSP) reimbursement should also check USDA requirements for meal patterns.)

MEAL PATTERNS	SAMPLE MENU
Breakfast:	
Juice or Fruit Cereal Milk Butter or margarine as needed	Raisins with oatmeal Milk Margarine
OR	OR
Juice or fruit Protein rich food Bread, enriched or whole grain Milk	Pineapple sections Peanut butter on flour tortilla Milk

MEAL PATTERNS	SAMPLE MENU
Snack:	
Milk or fruit vegetable or juice	Orange sections Milk
OR	
Protein rich food	Hard boiled egg
Lunch or Supper:	
Protein rich food Vegetable and/or fruit Bread, enriched or whole grain Butter or fortified margarine Milk	Tacos (corn tortilla, ground beef, lettuce, cheese) Tomato wedges Milk Banana half

a. Snacks should be planned to supplement nutrient needs not met in the meals. (USDA-SFSP requires a bread-stuff plus milk, fruit, or juice.)

b. Menus developed from the pattern can include cultural foods. For example, at lunch the meat or meat substitute, vegetable and bread could be made into an enchilada, taco or burrito using the meat or cheese or bean, tomatoes or tomato sauce and onion and an enriched corn or flour tortilla.

c. Fruit drinks and beverages made from fruit-flavored powders are not acceptable. They do not contain many of the vitamins and minerals found in natural juices.

d. "Milk" can be any type of fluid milk that meets State and local standards. The use of chocolate flavored milk is discouraged. Because it is sweet, it may satisfy the child's hunger before the child has eaten enough food to meet other nutrient needs. In addition, it is poor dental practice.

e. Raw vegetables contain larger amounts of Vitamin C than cooked vegetables. Include both raw and cooked fruits and vegetables in the menu.

f. A good to excellent source of Vitamin C should be served daily. Fruits and vegetables that are good to excellent sources of Vitamin C in the quantities consumed are listed below:

1) Excellent: Orange, orange juice, grapefruit, grapefruit juice, broccoli, collards, cantaloupe, raw tomato and raw strawberries.

2) Very Good: Mustard, beet and turnip greens, kale, cauliflower, chard, tangerine, and tomato juice.

3) Good: Spinach, raw green pepper, dandelion greens, raw cabbage.

g. A dark or yellow or leafy green vegetable should be served every other day to provide Vitamin A. Fruits and vegetables that are good to excellent sources of Vitamin A are: Sweet potatoes, carrots, pumpkin, broccoli, winter squash, apricots, peaches, tomatoes, cantaloupe, dark green leafy vegetables - beet and turnip greens, spinach, kale, collard, etc.

2. Since children's appetites vary, average serving size for specific age groups are suggested below:

	AGES		
	1	2-3	4-6
Milk	½ - 1 cup	½ - 1 cup	3/4 - 1 cup
Bread	½ slice	½ - 1 slice	1 - 1½ slices
Cereal	¼ cup	1/3 cup	½ cup
Vegetable			
Vit. A Source	2 Tbs.	3 Tbs.	4 Tbs.
other	2 Tbs.	3 Tbs.	4 Tbs.
Fruit			
Vit. C Source	¼ cup	1/3 - ½ cup	½ cup
other	2 Tbs.	3 Tbs.	4 Tbs.
Meat - Lean, cooked without bone	½ oz.	1 - 1½ oz.	1½ - 2 oz.
Egg	1	1	1
Dried Peas or Beans (cooked)	1 Tbs.	2 - 3 Tbs.	3 - 4 Tbs.
Peanut Butter	1 Tbs.	2 - 3 Tbs.	3 - 4 Tbs.
Cheese - Cheddar	½ oz.	1 - 1½ oz.	1½ - 2 oz.
Cottage cheese	1 Tbs.	2 - 3 Tbs.	3 - 4 Tbs.
Butter or margarine	½ Tbs.	1 Tbs.	1 Tbs.

Remember these amounts (like the amounts required by the USDA-SFSP) are minimums and are guides. Some children may need more than these amounts. Check the USDA guides for their mandated amounts.

II. Special Needs of the Pre-School Child

A. Physical Growth

1. The first year of life is the period when a person will grow most rapidly. At no other time in a person's life will the rate of physical growth be as rapid.

2. During the years from 1 to 3 the rate of growth slows. During this time growth will continue but will be slower than the first year. During this time a child is also growing in other ways - he is developing his sense of autonomy or his sense of being a person, distinct and separate from his mother.

3. The 3 - 6 year old child continues to grow but tends to grow in spurts. At times he may be full of energy and seem to eat more food than usual. Other times the child may eat less. This may be related to the child's growth rate.

4. A growing child needs all of the nutrients mentioned in Section I of the Study Guide. Special attention should be given to the following nutrients.

   a. Protein - This nutrient is needed for growth of new tissue; muscle tissue, bone tissue, organ tissue, brain tissue. All cells are made of protein so this nutrient is needed for overall growth.

   b. Calcium - This nutrient is needed for bone growth. The bones are getting longer and thicker and stronger throughout childhood. Teeth are also developing; the permanent teeth are adding calcium to their structure even though they cannot be seen. Adequate amounts of calcium are needed to insure proper growth.

   c. Iron - New red blood cells are formed throughout life. The body will make more new blood cells during a period of rapid growth than at other times. Adequate quantities of iron are needed for this growth.

   d. Vitamins A and C - These nutrients are needed during growth for the formation of new cells.

   e. Other Nutrients - During rapid growth there is an increased need for all nutrients. If one or more nutrients is missing, the growth will be slowed or will not happen.

   f. Calories - Energy is needed for the formation of all new tissue. The body is working hard to produce new tissue and this takes a lot of energy.

B. Other Types of Growth

1. Other types of growth occur in the pre-school child. At this time a child is learning many things such as socialization skills relating to mealtime, fine and gross motor skills, and information about the world he lives in.

2. Pre-school children are learning about themselves and about adults at this time. Therefore you will find a lot of unusual eating behaviors during this period. This learning behavior may be exhibited as a poor appetite, food dislikes, refusal to eat, dawdling or playing with food or food jags. A discussion of possible ways to deal with these behaviors follows:

a. Poor Appetite

Sometime between the first and second year his growth slows down and he will not need as much food. Many children become fussy and choosy. Don't offer sweets as a bribe in order to get him to eat! Don't let him drink so much milk that he doesn't have room for other foods. Offer foods at about the same time every day. Haphazard feeding, or allowing children to eat at any time will cut down on their appetites at mealtime. Mid-morning and mid-afternoon snacks are fine if they are nutritious foods and are not given just before meals. His appetite will vary from day to day. Don't coax him to eat more. He is a fairly good judge of how much he wants to eat.

b. Food Dislikes

Likes and dislikes often change without warning. If no one in the family makes them seem important, the child will probably outgrow these dislikes. Eat the way you want your child to eat. If your child definitely dislikes a particular food, offer another similar food in the same food group. (Example: If he dislikes pears, you might offer peaches or other fruit.) Remember that your child will not always want to eat everything that is served to him any more than you do. Perhaps, preparing the food in a different way may change his attitude. Children like pretty colors; foods that "crunch"; warm food, not too hot or too cold; smooth thick consistency in milk soups and puddings; simple foods; bite-size foods so they don't have to struggle. They like to feed themselves. They don't like gummy foods that stick to the roof of their mouth.

c. Introducing New Foods

Introduce only one new food at a time. Offer just a small amount at the beginning of a meal. Don't give a child a new food when he doesn't feel well, or when he is cross or irritable. If the food is refused, take it away and try again at a later date. Spitting out a new food may not mean that he doesn't like it; this is just a reaction to a new taste, and maybe texture. A tired or unhappy child is not likely to try a new food, so offer a new food when he is hungry and in a good "mood". Serve a new food with favorite foods.

d. Refusal to Eat

If the child seems to feel all right, remove him from the table to another part of the classroom and allow him to select an activity that will not distract the other children. Do not bribe or punish. Do not force-feed or offer sweets as a reward. Haphazard snacking spoils the appetite for regular meals, so eliminate this. Don't urge food on him if he doesn't want it. The candy and soda pop habit is a real threat to your child's nutrition. If he is given these foods often, he will not enjoy the bland foods in his normal diet and the sweet foods will replace those that he needs for good health.

e. Dawdling or Playing with Food

There will be some dawdling with most children as they have no sense of time to make them hurry. Let the child have a reasonable length of time (20 to 30 minutes) to eat. Offer help if he needs it to finish as he may be too tired to finish eating. If this continues to be a problem, do not give between meal snacks. A short rest period before meals may help. A tired child dawdles over food. Tell him that you will remove the food when he is finished, but do not threaten.

f. Food Jags

If a child has a food jag he wants to eat only one food. For example, the child may want a peanut butter sandwich for every meal of the day for many days. Finicky food habits and food jags are characteristic of four year olds. Let the child have his peanut butter sandwich but make sure there are other appetizing foods available. Don't make an issue of it.

g. Characteristics of the Preschool Child

1) He is a reliable judge of how much he wants to eat.

2) The 2 year old often eats less than the one year old.

3) He prefers warm foods rather than cold ones.

4) He likes mild flavored, simply prepared and colorful foods.

5) He likes finger foods and other foods easily managed by his unskilled hands.

6) He needs to be allowed to feed himself as soon as he shows an interest in trying.

C. Feeding Development

1. A child's ability to feed and serve himself is developing between the years of 1 to 6 or 8. The following guide shows expected self-feeding behavior at different ages. If a child is not right at his age level for development, he is still normal. Different children develop at different rates. This guide can be used to point out children grossly behind for their age. For example, if a 4 year old child still has to be fed, you can be sure that there is a problem that needs attention. A referral to the CDA advisor, public health nurse, or physician is needed to determine the exact problem.

2. Children need to be given a chance to do things for themselves. To develop skill in feeding and serving themselves takes practice. Expect messiness when beginning a new skill.

3. A General Sequence of Feeding Development

AGE	BEHAVIOR
4 to 6 months	Accepts food from spoon Accepts liquid from cup Some chewing motions

AGE	BEHAVIOR
7 to 11 months	Holds bottle without help May feed self cracker Chewing is well developed
12 months	Finger feeds part of meal Bites and chews food well Holds spoon
15 months	Attempts to feed self with spoon Helps hold cup in drinking
18 months	Drinks from cup — two hands holding Feeds self part of meal with spoon (may overturn spoon) Some difficulty getting spoon to and in mouth
2 years	Holds spoon well Spoon to mouth without overturning Feeds self independently, but may need help (spills and is messy) Drinks from small glass — one hand holding
2½ years	Less messy eating; some may be spotless Can pour from pitcher Can drink at faucet May spear with fork
3 years	Uses fingers to feed self May use fork for eating — spoon well controlled Can serve own plate
4 years	Likes to use fingers to feed self Uses fork and spoon Drinks through straw easily Attempts to spread with knife
5 years	Fairly skillful in handling fork Begins spreading with knife
6 years	Independent except for cutting with knife

III. Social, Psychological, Cultural, and Religious Reasons for Eating

A. Why do people eat? All human needs may be classified into the physiological needs (the survival needs) and into the social needs. The first needs filled are those for survival. Therefore, the first reason a human eats is for hunger or survival. If there is sufficient food available to satisfy hunger, then food and eating will take on new meanings and satisfy other needs.

B. Social needs are satisfied after survival needs.

1. A feeling of security is associated with orderliness or lack of anxiety and tension over whether food will be forthcoming. Certain foods foster security more then others, even apart from their ability to satisfy hunger.

2. For many people, milk is the primary security food because it is associated with early family life. Sweets must have a rather deep meaning for many as evidenced by the use of them to relieve tension. A feeling of security may be achieved by the storing of food so that future meals are assured.

3. Food and meals are often used to promote interpersonal sociability or acceptance by others. If you accept a person into your home and want to make them wlecome, food or beverage is usually offered.

4. Food is also used as a gift. Valued foods are the more prized gifts. Homemade bread, rare or exotic fruits, expensive foods are all valued gifts. Food plays a role at important events like holiday celebrations, births, weddings, and funerals.

5. Food is often used to attain status. Cattle may be kept as a symbol of family wealth rather than for the food it provides. Certain foods are prestige foods and this is affected by the cultural values. Bread is a prestige food for some people. In some cultures it must be white to enjoy the highest prestige. Meat is a prestige food with many people.

C. Food may have certain psychological meanings.

1. That food is used to relieve tension is commonly known. Food is used as a reward or punishment. People associate sweets, candy, and other foods with good times and with being good. When a person feels bad or is tense they may attempt to cheer themselves with food. Emotions may affect eating in just the opposite way; rejection of food or refusal to eat.

2. Food may be used to influence the behavior of others. To use foods as a reward is not encouraged because children then associate that food with being good, i.e. and then might overeat the reward foods when they feel bad.

3. Young children learn very early that to eat or not eat their foods is a quick way to get a reaction from anxious adults. Many children are masters at controlling adults through their eating behavior.

D. Food habits vary from one culture to another because each group establishes its own patterns of accepted behavior.

1. Availability of foods has often determined which foods become important to a cultural group. Food habits may continue to be identified with a particular culture long after availability ceases to be an important factor. It is interesting to discuss cultural variations in food habits with people of different cultural backgrounds. Are you aware of any particular foods which are important to you and your relatives? Are there any foods which you prepare in the same way that your mother and grandmother did?

2. It is important to realize that food habits vary greatly with individual tastes and preferences, and that it is impossible to predict an individual's eating preferences from his cultural identity.

E. Religion, as well as culture, may influence individual's food habits. Food has been associated with religious practices for as long as man has existed. Some religions have taboos or laws against the eating of certain foods. Other foods may be ritually important, and eaten during special ceremonies.

IV. Mealtime Experiences

A. Mealtime and snacktime take up a good portion of the time children spend at the center. This time can be used for many learning experiences in addition to providing the children with nutrients they need. Eating should be regarded by children as pleasurable. They should look forward to it with anticipation. The intern can promote this attitude by providing an environment for mealtime that children respond to. A clean, well-lit, well-ventilated dining room is needed, free of noise and activity by outsiders, with comfortable chairs where feet can touch the floor, tables seating about 5-6, and at a height from which children can eat comfortably. Children should be relaxed, rested after outdoor play or other physical activity, toileted and hands washed ready to eat. Food should be served at about the same time every day so children know what to do and what is expected of them.

B. Observation of safe and sanitary food handling practices is important to prevent food contamination, especially in family style food services. Children need to be taught not to put serving utensils in the mouth and not to handle the serving utensils by the parts that dip into the food container or put fingers into the food containers. Children need to learn to cover the mouth and nose when coughing or sneezing, especially when serving food or eating. Food from the children's plates must never be returned to the serving dish. Food from the serving dish should be discarded, and not used as a leftover. Milk from a large container that will not be completely used up during the meal should be poured into small pitchers and refilled from the refrigerated container as needed. Adults are good examples to children. Remember - good habits are caught not taught.

C. In centers having no on-site kitchen, the delivered food needs to be inspected for quality on arrival. Hot food should be hot, cold food, cold. Mealtime should be scheduled to coincide with the delivery schedule so that food need not be held or reheated.

D. Mealtimes are important times for the development of language skills. Adults sitting at the tables with the children should encourage the children to talk about the foods they are eating and anything else the children want to discuss. Adults should be careful not to dominate the conversation, but should say just enough to stimulate the children's thinking.

E. Refer also to the checklist for mealtime experiences in Supplement #2 for guidance.

V. Food Preparation Program

A. Children form eating habits and food preferences gradually by experiences with food.

1. The child's early food choices are limited by the food given him. Pleasant association with eating and foods and exposure to a large variety of nutritious foods including cultural and ethnic foods will help the child learn to eat and enjoy nutritious foods.

2. Three basic nutrition concepts appropriate for preschool children are: (a) food is good, (b) many kinds of food are good, and (c) eating is fun. Learning about food can be associated both with mealtime and with other daily activities. Successful planning of simple "do-able" food experiences in keeping with children's interests, needs and development requires the cooperative effort of teacher and cook. It should also aim to involve parents.

3. The absence of classroom food preparation facilities need not be a deterent to providing children with food-related activities. Many activities that require no cooking are available. Portable electric appliances such as an electric frying pan, toaster-oven or hot plate can be used successfully in the classroom under supervision and safety precautions.

B. There are several administrative decisions which need to be made about a food preparation program for children. Questions of this type need to be answered before a food experience program is developed:

1. How often do you want a cooking experience?

2. How interested are children and staff?

3. How will the food be bought - will it come from the food budget or educational materials budget?

4. Where will the cooking utensils come from?

5. Will they be purchased special or borrowed from parents?

C. Basics to remember when developing a food experience program:

1. Have cooking experience at about the same time of day each time it is planned. Just before or at snack time is a good time and it can take the place of a snack if the proper foods are used.

2. Related stories, songs, games, or films can be used before or after the preparation and eating of the food.

3. Have one adult in charge of planning the project - ordering food ahead of time from the cook or store, collecting necessary utensils and equipment, deciding the order of procedure.

4. An entire program including several recipes and skill levels should be planned. The intern or person planning the program should make out a cooking schedule to be followed during the term or entire year.

5. In this schedule include date, cooking technique to be used, name of the person in charge of cooking that day; name of assistant if needed. If the person to do the experience is a parent, he/she should be contacted a few days ahead of time to allow for preparation. The person should be given a copy of the recipe to be used and instructions on procedure. A picture recipe should be made for use in the classroom. The program should involve one or more recipes for each level of skill.

D. There are five levels of skill that may be used with preschool children.

1. A four year old could help prepare any recipe included. Group V emphasizes fine motor coordination and will be the last group of skills used and may not be reached by all children. Each level of skill develops gross or fine motor skills necessary to progress to the next level of skill. The first level of skill or gross motor and socialization skills includes experiences tasting new foods. These activities should be used throughout the year to introduce new foods even when the cooking program has passed this level of skill.

2. Once a group of experiences for a level of skill is completed, the second level of skill may be started. It is very important to go through each level as the fine motor skills developed build on one another.

3. The Skill Levels (Techniques) are:

a. Group I - Gross Motions and Socialization

1) Tasting and sitting at table - This requires that children control their bodies and sit in one place. This is a social skill that is learned. These activities are excellent to introduce new foods and should be used through out the year.

2) Dipping - The adult may do the cooking if it is required before dipping. Young children get much satisfaction from repeating a motion like dipping over and over. Children like to dip meats into flour or fresh vegetables into sour cream. If a recipe calls for something like orange juice, which the children are not yet ready to prepare, the adult can do it in advance.

3) Scrubbing - Scrubbing or wiping tables before a cooking experience will teach good sanitation habits. Scrubbing potatoes or carrots before eating or boiling teaches beginning eye-hand coordination that does not require a lot of accuracy.

4) Tear, break, snap - Children are beginning to use their hands as tools to do something that changes the shape of food. There are many foods that go well with this technique: cauliflower for breaking, cabbage for tearing into slaw, lettuce for tearing into salad.

b. Group II - Beginning Manipulation and Eye-Hand Coordination

1) Wrapping - This involves completely covering an object by taking a flat surface (foil) and bending it around that object. The children's hands have to put the object where they tell them to, not just scrunch together aluminum foil around a potato and call it wrapped. This will have to be explained and demonstrated to the children. If the children are given the self-correcting device or instruction that none of the wrapped object should show, they may check their own and other children's work.

2) Pouring - Water play with pots, pans, cups, and glasses is good practice for this skill. Mark a plastic glass with a line mid-way or with a rubberband. Ask the children to pour from a small pitcher filled with juice to the line on the glass. Show them how to hold the pitcher with one hand, placing their other hand under the spout to guide and control how much is poured. This is developing eye-hand coordination. All recipes which require measurement and pouring of liquids can be used to develop this skill. Children may also pour their own milk or juice at the table.

3) Mixing and shaking - Mixing with a spoon is the first part of this level of skill. The mixing part should be separated from the rest of the preparation of a recipe. The adult may prepare everything and then let the children mix it together. For example, with cabbage slaw the cabbage and carrots are already grated. The children would mix the mayonnaise with cabbage and carrots.

Shaking is a form of mixing that requires more vigorous activity. It should be introduced after other forms of mixing. Show the children how to push up with the bottom while holding firm with the other hand, then reverse the process by pressing down while holding firm with the bottom hand. Shaking butter is a good experience after some practice.

4) Spreading soft into firm - Try to show children how to hold the knife with the thumb and index finger, resting the handle inside the palm, then hold the elbow still and rotate the wrist to get the proper spreading motion. Explain that whatever is to be spread should be pulled gently across the surface rather than pushed down. Some children find this a difficult skill. Either thin, or warm food that is to be spread so it is soft. Spread soft cream cheese on celery for a start.

c. Group III - Finer Motions and Use of Both Hands

1) Rolling with both hands - Be sure hands are scrubbed. Show the children how to pinch off the right amount of foodstuff to end up with right sized ball. Explain that each hand makes a circle in the opposite direction while pressing together very gently. Rolling meat balls or peanut butter cookies is a good activity.

2) Juicing - The fruit to be juiced (orange, lemon, grapefruit) should be cut in half ahead of time. Use a plastic or metal juicer so that it will not break if dropped. A damp cloth under the juicer will help prevent slippage. One hand should hold the juicer in place while the arm is pressing down and rotating from the elbow. Make sure the juicer and working surface are low enough for proper arm movement. The fruit to be squeezed will yield more juice if it is rolled with the hands on a hard surface before it is cut. The juice may be drunk by itself, or poured over bananas.

3) Peeling with fingers - This skill requires control of finger-thumb opposition. A good pre-requisite would be sorting small objects. Begin with large objects like corn in husks and work toward fine control with peeling eggs.

4) Cracking raw eggs - This is a difficult skill. Think of the child who has never cracked an egg and describe the process step by step. Use a heavy bowl and have many extra eggs for those that are dropped on the table or become so mixed with the shell as to be unusable. Scrambled eggs are a good beginning, then proceed on to an activity like eggnog which uses the learned skill of mixing.

d. Group IV - Coordination and Working Against Resistance

1) Cutting with table knives - Have an individual cutting board and table knife for each child. Begin with a semi-soft food like cheese. The food should have a flat edge so that it can be easily held in place. Demonstrate where it is to be cut.

2) Grinding - This requires a hand-crank meat and vegetable grinder. The grinder should be clamped to a solid surface. Usually 2 grinders for a group of 16 children are sufficient to give each child a chance to grind. This is a tiring activity. Peanut butter, carrots for salad, apples, cranberries may be ground. Ice cream may be made in a hand turned freezer. An adult should help crank at the end as it requires big muscles.

3) Beating with an egg beater - This is similar to juicing. The beater bowl should rest on a damp cloth to prevent slipping. The beater should be held with the left hand and centered in the bowl, then press down on the beater from the top while turning the handle with the other hand. Three children for each beater is about the right number. This will keep the children from having to wait too long.

c. Group V - Fine Coordination and Understanding Sharpness

1) Peeling with a vegetable peeler - Demonstrate how to hold the handle so the blade is free to swivel, otherwise children may hold the blade and not be able to peel anything. Point out that the blade is knife-sharp. Begin with carrots, demonstrating how to hold the carrot from the bottom, while holding the peeler with the other hand, peeling away from themselves at a downward angle. When this skill is accomplished, carrots and a peeler may be placed in the playhouse area for them to peel as a snack or for dramatic play. Potatoes and apples are more difficult to peel because of the round shape.

2) Grating - A square metal grater of the upright variety is easier to use. It is easy to grate fingers so point out the knife sharp prongs and caution the children to stop grating the food while they still have a good hold on it. Cheese or hard cooked eggs are good foods to begin with because they are soft.

3) Slicing with sharp knives - A very thorough demonstration of how to use sharp knives is first. Emphasize the need to look to see which side is sharp so that the cutting edge is always facing the cutting board. One or two children at a time should do this activity with an adult present. At first a fairly soft food with a flat edge to prevent rolling (like cheese) should be used. If the child grasps the handle of the knife firmly in the palm of his hand and extends his index finger over the top (dull) blade he can control the angle better than if he grasps the handle with his whole fist. Show him the sawing method, how to pass a sharp knife to another person with the handle away from himself and with the blade up so he won't get cut as the knife changes hands. Safety precaustions should be repeated and stressed each time that sharp knives are used.

4. Each individual cooking project should have an activity card. There are some cards already available. Others may be developed by the intern using new ideas, recipes from home, cultural foods, and ideas from parents. The activity card should include the following information: (For example of an activity card see Supplement #3)

   a. Technique or level of skill.

   b. Name of project.

   c. Equipment needed.

   d. Ingredients needed.

   e. Procedure.

5. Before the cooking activity, a written recipe on a flip chart should be made. A visual recipe for the children to follow is is good for language, math, and learning to follow directions. (See Supplement #3 for a sample food preparation program.)

RESOURCES FOR FURTHER STUDY

Basic Nutrition

1. Martin, Ethel A. Nutrition In Action. New York, Holt, Rinehart and Winston, Inc., 1971, 3rd edition.

2. Food Is More Than Just Something To Eat. U.S. Depts. of Agriculture and Health, Education and Welfare, Government Printing Office, Washington, D.C.

3. Your Child From 1-6. U.S. Dept. of Health, Education and Welfare, Children's Bureau, 1962, #30.

4. How Nutrition Relates To Learning. R.M. Leverton, Journal of Nutrition Education, Fall, 1969.

5. Feeding the Child With A Handicap. U.S. Dept. of Health, Education and Welfare, Pub. #HSM 73-5609. Available free from:

   U.S. Health Services Act
   Maternal and Child Health Services
   Park Lawn Building
   Rockville, Maryland 20852

6. Feeding Little Folks. National Dairy Council, 1963. Available from local Dairy Council.

7. Deutsch, Ronald M. The Family Guide To Better Food and Better Health. New York, Meredith Corporation - Creative Home Library, 1971.

8. Lowenbury, Miriam E. and others. Food And Man. New York, John Wiley and Sons, Inc., 1968.

9. Feeding Your Young Children. Filmstrip. Available free from local Dairy Council.

10. How Children Learn About Food. Slides or flash cards with text. Available from:

    Visual Communications Office
    412 Roberts Hall
    Cornell University
    Ithica, New York 14850

11. Arizona Dairy Council - Nutrition information and materials for classroom use. Order catalog from:

    Arizona Dairy Council
    3737 E. Indian School Road
    Suite 401
    Phoenix, Arizona 85007

12. Arizona State Department of Health has a film library with materials available for loan. Some of these materials are listed in Supplement #7. Order catalog and/or films from:

    Health Education and Training Division
    Arizona State Department of Health
    1740 West Adams Street
    Phoenix, Arizona 85007

    Phone: (602) 271-4546

13. Headstart Performance Standards And Guidance.

Cooking In The Classroom

1. Jenny Is A Good Thing. Film. Available free on loan from STO Office or Modern Talking Picture Service, Inc.

    Modern Talking Picture Service, Inc.
    2323 New Hyde Park Road
    New Hyde Park, New York 10040

2. Children Can Cook. Fimlstrip/records. For staff training. Order from:

    Bank Street College of Education
    610 West 112th Street
    New York, New York 10025

    Price $14.00

    or free on loan from:

    Headstart Director
    NACOG Grantee
    P.O. Box 57
    Flagstaff, Arizona 86001

3. Foster, Florence P. Adventures In Cooking. Kenyon Chapter, New Jersey Association for the Education of Young Children, 810 Harding Street, Westfield, New Jersey 07090. $2.50 per copy plus $ .50 handling.

4. Goodwin Mary T. and Gerry Pollen. Creative Food Experiences For Children. Center for Science in the Public Interest, 1779 Church Street, Washington, D.C. 20036. $4.00 per copy.

5. Teaching The Young Child Good Eating Habits For Life. Missouri Home Economics Association, 308 Loch Lane, Columbia, Missouri 65201. $1.00 per copy.

6. Ferreria, Nancy. The Mother - Child Cookbook. Pacific Coast Publishers, Menlo Park, California 94025. $3.50 or $4.00 per copy.

7. Cooking And Eating With Children - A Way To Learn. Available from:

    Association for Childhood Education, International
    3615 Wisconsin Avenue, N.W.
    Washington, D.C. 20016

    Price: $2.50 plus postage

SUPPLEMENT

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SUPPLEMENT #1 - NUTRITION QUESTIONS FOR DISCUSSION

A. Scientists have devised a guide for making daily food choices. In this guide, foods are classified into groups.

a. How many groups are there?_____

B. Name these groups._____

_____

B. Fill in the missing word. Some items may not fit into a group - leave them blank.

a. Tuna is classified in the_____group.

b. Peanuts are classified in the_____group.

c. Cheese is classified in the_____group.

d. Corn oil is classified in the_____group.

e. Enriched macaroni is classified in the_____group.

f. Tomatoes are classified in the_____group.

g. Tortillas are classified in the_____group.

h. Ice cream is classified in the_____group.

i. Grape jelly is classified in the_____group.

j. Refried beans are classified in the_____group.

k. Potatoes are classified in the_____group.

l. Eggs are classified in the_____group.

C. The following nutrient classes have a primary function. What is it?

a. Carbohydrates_____

b. Fat_____

c. Protein_____

d. Minerals_____

e. Vitamins_____

f. Water_____

(questions for discussion continued on next page)

SUPPLEMENT #1 - NUTRITION QUESTIONS FOR DISCUSSION-CONTINUED

D. Listed are the major nutrients supplied by each of the food groups. Name the correct food group.

a. Protein, fat, iron: _____

b. Vitamins C and A: _____

c. Calcium, protein, riboflavin: _____

d. Carbohydrates, thiamin, iron: _____

E. Circle the lunch meals you consider balanced and which follow the Headstart Meal Pattern discussed in the Study Guide:

a.
Hamburger
Bun
Lettuce and Tomato
Mayonnaise
Milk
Grapefruit Sections

b.
Fry Bread with
Pinto Beans and Cheese
Carrot Sticks
Avocado and Grapefruit Salad
Milk
Chocolate pudding

c.
Enchiladas and Tamale
Milk
Orange Sections

SUPPLEMENT #2 - CHECKLIST FOR MEAL AND SNACK TIME

A. Environment

1. The dining room or area is clean, well-lit, and well ventilated. _____

2. The dining table and chairs are child-sized, the tables preferably seat 5-6. _____

3. Serving and eating utensils are appropriate for small hands. _____

4. A relaxing activity and handwashing precede the meal. _____

5. There are extra serving spoons, forks, etc., to replace those that might be dropped on floor or that child has put into mouth or handled incorrectly (fork tines, bowl of spoon, etc.) _____

6. Milk or other liquid is poured from large container into small pitcher and remainder is returned immediately to refrigerator if any is left over in large container. _____

7. For centers with food delivered from a central kitchen, check to see that quantity is correct and that hot foods are hot and cold foods cold. _____

B. Conducting the Meal

1. Children participate in the pre-meal activities such as helping the cook (a few at a time), cleaning and setting tables, etc. It is best to assign one child at a time to avoid confusion. _____

2. An adult is seated at each table. _____

3. The intern sits down at the table at the same time as the children do, after the food is brought to the table. _____

4. The food is brought to the table in serving bowls and platters. _____

5. Meal service begins as soon as children are seated. _____

6. Children may begin to eat as soon as they are served. _____

7. The intern uses family style service, allowing children to serve themselves whenever possible. _____

8. The intern checks to see that children serve small portions which can be finished, and offers second portions. _____

9. The intern allows for differences in portion size according to the individual child's needs (age, size, appetite, etc.) _____

10. The food served is easily managed by the children (bite-sized, finger foods, tender meat.) _____

11. The intern eats the same food as the children, and demonstrates enjoyment by an accepting attitude. _____

 (checklist continued on the next page)

SUPPLEMENT #2 - CHECKLIST FOR MEAL AND SNACK TIME-CONTINUED

12. The intern encourages the children to eat their food, and to taste new foods, but never forces them to eat. _____

13. The intern does not use food as a reward, bribe, or punishment. (The advisor should check to see that the more subtle use of food as a reward, bribe, or punishment is not employed such as withholding milk or dessert until the plate is cleaned, providing gold stars or other rewards for clean plates, etc. Desserts should be simple - fruits, pudding, banana bread - served as <u>part</u> of the meal, <u>not</u> as dessert. _____

14. The intern promotes or initiates topics of conversation between children and between children and adults, (although the food served at mealtime is a good topic of conversation, it should not be the sole topic of conversation.) _____

15. The intern demonstrates the ability to fit the child with a feeding handicap into the feeding situation. (Such as showing a child how to hold a spoon, assisting with cup drinking, having a child with a problem sit close by for assistance.) _____

16. The intern demonstrates good manners and hygenic practices through her actions at the table to set an example for the child:

    a. Please and thank you.

    b. Use of napkin.

    c. Use of utensils (replacing utensils that were dropped).

    d. Use of hygenic practices when passing and serving food (replace dropped or improperly handled serving spoons, wipe up spills immediately, discard food in service bowls that is left over). _____

17. The intern allows children sufficient time to eat, including seconds, especially slow eaters, and to leave the table when finished. _____

18. The children are enjoying the mealtime. _____

19. There is little or no plate waste. _____

SUPPLEMENT #3 - SAMPLE FOOD PREPARATION PROGRAM

COOKING SCHEDULE FOR FALL TERM

DATE	TECHNIQUE	NAME OF PROJECT	PERSON IN CHARGE
9/3	Group I Gross Motions/socialization	Variety of melons	self
9/10	" /socialization	Popcorn	Ms. Jones
9/17	" /dipping	Cauliflower	self
9/24	" /dipping	Raw vegetables/ cottage cheese	Ms. Begay
10/1	" /scrubbing	Baked Potato	Ms. Roberts
10/8	" /scrubbing	Carrots	*
10/15	" /tear, break	Green Beans	*
10/22	" /tear, break	Salad	*
10/29	" /socialization	Cooked Prunes	*
11/5	Group II Beginning manipulation/wrapping	Baked Potato	
11/12	" /wrapping	Hot Dog Wrap-around	
11/19	" /pouring	Cocoa	
11/26	" /mixing	Carrot/Raisin Salad	
12/3	" /mixing	Pancakes	
12/10	" /mixing	Butter	
12/17	" /spreading	Stuffed Celery	

*Person in charge may be decided on a monthly basis rather than for the whole term at one time.

Notice that each technique or skill level is used several times before going on to the next skill level. The foods prepared may be used as a snack or for part of the meal. As children acquire skills, an entire meal may be prepared. At the end of the year or when the children are able, let them plan and prepare an entire meal for the parents.

(Supplement #3 continued on next page)

SUPPLEMENT #3 - SAMPLE FOOD PREPARATION PROGRAM-CONTINUED

The information for an activity card from Group I - Food Preparation Activities follows:

NUTRITION

Group I Dipping - Raw/Cooked Cauliflower**
Purpose: Development of gross motions and socialization skills.

Equipment needed:	Ingredients:
Cutting board	2 small heads of cauliflower
Table knife	salt
Large bowl and spoon	sour cream or French dressing with catsup
Slotted spoon	
Bowls, paper cups, forks	

Procedure: Let children break cauliflower head into pieces and wash. Point out that these are flowers we eat. They may cut flowers into small pieces and mix with French dressing-catsup, or drop into salted water (after water boils) to cook until tender, about 10 minutes. Children may dip raw and cooked cauliflower in sour cream - How does it taste different? - They both taste good!

**From the Mother Child Cookbook

Picture Recipe of Raw/Cooked Cauliflower (Group I - Dipping - Activity #3 of the Cooking Schedule):

NUTRITION

PICTURE RECIPE

Raw/Cooked Cauliflower - Group I - Dipping

Take: 2 heads

Break:

Wash:

Cook: and/or

Dip: and eat

SUPPLEMENT #4 - CHECKLIST FOR FOOD PREPARATION EXPERIENCES

1. The plan for the food preparation activity includes the following:

   a. Adult assigned to be in charge. _____

   b. Duties for assistant (if needed) are assigned. _____

   c. Activity card is ready for use and has been reviewed by adult. _____

2. The required ingredients and utensils (from activity card) are arranged on a table at hand level of children ready for use. _____

3. A picture recipe is posted if appropriate. _____

4. Children are divided into small groups with one adult for less then 10 children. _____

5. Precedures and unfamiliar names of utensils, cooking tasks, and ingredients are explained. _____

6. New skills are demonstrated. _____

7. Safety and sanitation precautions are pointed out and demonstrated during the activity. _____

8. The tasks are suited to the activities and age levels of the children. _____

9. A relaxed attitude prevails throughout the activity, there is no confusion. _____

10. The adults work well with the children and allow freedom of operation. _____

11. Each child has opportunity to participate in food preparation activity and clean-up. _____

12. Children are supervised by an adult in the kitchen if oven, stove, or refrigerator is to be used to finish the product. _____

13. Sensory experiences are used to teach concepts of color, texture, odor, taste, size, etc. of ingredients and finished products. _____

14. Explanation of how to make any new measurements and new numbers are in terms the children can understand. _____

15. Children are encouraged to ask questions about the changes that occur when the ingredients are mixed and subjected to various processes. _____

16. Children are encouraged to express themselves and describe what is happening. _____

17. Children are encouraged to show self-direction and creativity. _____

18. The end products are tasted and/or eaten by the children. _____

19. Provisions are made for the child to take samples home or share information about activities with parents. _____

SUPPLEMENT #5 - HEADSTART PERFORMANCE STANDARDS FOR NUTRITION WITH SELECTED GUIDANCE

PERFORMANCE STANDARDS

S 1304.3-9 Nutrition objectives.

The objectives of the nutrition part of the health services component of the Headstart program are to:

a. Help provide food which will help meet the child's daily nutritional needs in the child's home or in another clean and pleasant environment, recognizing individual differences and cultural patterns, and thereby promote sound physical, social, and emotional growth and development.

b. Provide an environment for nutritional services which will support and promote the use of the feeding situation as an opportunity for learning.

c. Help staff, child and family to understand the relationship of nutrition to health, factors which influence food practices, variety of ways to provide for nutritional needs and to apply this knowledge in the development of sound food habits even after leaving the Headstart program.

d. Demonstrate the interrelationships of nutrition to other activities of the Headstart program and its contribution to the overall child development goals.

e. Involve all staff, parents and other community agencies as appropriate in meeting the child's nutritional needs so that nutritional care provided by Headstart complements and supplements that of the home and community.

S 1304.3-10 Nutrition services.

a. The nutrition services part of the health services component of the performance standards plan must identify the nutritional needs and problems of the children in the Headstart program and their families. In so doing account must be taken of:

1. The nutrition assessment data (height, weight, hemoglobin hematocrit obtained for each child.

GUIDANCE:

These data should be available from the child's current health evaluation record or his medical history record. Height and weight measurements should be plotted on growth charts at the beginning, middle and end of the school year. Other pertinent information can be obtained from the medical and dental records.

Underheight/underweight children may need additional food provided at the center along with follow-up at home.

Overweight children need follow-up to identify the specific factors involved in weight problem and realistic interventions consistent with good child growth and development practices both at the center and at home.

SUPPLEMENT #5 - CONTINUED

Children with anemia and similar medical nutrition problems need specific diagnoses and follow-up. A child with a hemoglobin of less than 10 or hematocrit of less than 30 is considered to be anemic. This is consistent with the standards of Public Health Service, Maternal and Child Health and with CDC National Nutrition Status Survey as well as EPSDT guidance material.

Children with unresolved nutrition-related needs should be referred to appropriate agencies who have continuing contact with the child for follow-up after the child leaves Headstart.

2. Information about family eating habits and special dietary needs and feeding problems, especially of handicapped children.

3. Information about major community nutrition problems.

b. The plan, designed to assist meeting the daily nutritional needs of the children, shall provide that:

GUIDANCE

The child's total daily nutritional needs should be supplied by the food served in the home, complemented by the food served at the center.

1. Every child in a part-day program will receive a quantity of food in meals (preferably hot) and snacks which provides at least 1/3 of daily nutritional needs with consideration for meeting any special needs of children, including the child with a handicapping condition.

GUIDANCE

The recommended Dietary Allowances of the National Research Council, National Academy of Sciences are used as the basis for establishing the nutritional needs of the child. Foods in the pattern shown under (b) (4) meet these needs. Calculations of nutrients in food served can be compared to the Recommended Dietary Allowances as a cross-check in assuring that 1/3 of the nutrient needs are met if there is any question of adequacy of the meals.

To meet 1/3 of the daily nutritional needs, use the lunch or supper pattern plus a breakfast or snack pattern. If the morning breakfast is used as the main meal rather than lunch or supper, it must be very substantial and include a protein-rich food in addition to milk to help meet 1/3 the daily nutrient needs. In addition, the snack served must also be carefully planned to add fruit or vegetable and probably milk in order to meet the remaining nutrient needs.

Choose foods for meals and snacks that contribute not only to the child's nutrient needs but also to good dental health and support the dental education program. Do not serve overly sweet and sticky foods especially those high in refined sugars.

SUPPLEMENT #5 - CONTINUED

The nutrient needs of handicapped children are the same as for other children. However, due to difficulties in chewing or swallowing or lack of feeding skills the texture and consistency of the foods may need to be modified. In other conditions which require modification of the menu such as in food allergies, digestive or metabolic disturbances, etc., this information should be part of the child's health record and a physician's prescription must be kept on file at the center and at the food preparation site and updated periodically. A qualified nutritionist should help plan for meeting these needs.

General use of special dietary foods such as vitamin fortified modified milk products either as snacks or as meal supplements are not allowed. They are not in keeping with Headstart nutrition program goals of (1) providing needed nutrients through well planned meals, (2) providing a variety of food and eating experiences, and (3) providing opportunities for children to participate in menu planning and wherever possible in simple food preparation and selection, (4) reinforcing cultural and ethnic practices found in the children's homes.

2. Every child in a full-day program will receive snack(s), lunch, and other meals as appropriate which will provide 1/2 to 2/3 of daily nutritional needs depending on the length of the program.

GUIDANCE

To meet 2/3 the child's nutrient needs will necessitate the use of the lunch or supper pattern plus breakfast and a snack or plus two well planned snacks, one of which contains milk. Even so calorie intake using the suggested quantities is generally inadequate, so it is critical to have seconds available and use butter or margarine as appropriate.

3. All children in morning programs who have not received breakfast at the time they arrive at the Headstart program will be served a nourishing breakfast.

GUIDANCE

Since it is virtually impossible for small children to meet their nutrient needs without having 3 meals a day, breakfast is required to be available at the center for children who have not had it at home. Breakfast should be served immediately upon arrival of the child at the center. If only a small number of the children arrive without breakfast, concentrate on supplementing the snack with simple additional foods to meet the breakfast pattern and serve the snack early. All children should then have access to this. If a majority of the children come without breakfast, it may be simpler to serve breakfast to all children.

SUPPLEMENT #5 - CONTINUED

The use of the grain/fruit product or fortified cake roll made to meet specifications as a replacement for the bread and/or cereal and fruit components of the breakfast pattern is not consistent with Headstart philosophy and thus is not acceptable. They neither satisfy the need for meeting cultural food preferences nor the need for using the feeding program to teach sound food habits and attitudes by introducing the child and family to a wide variety of nutritious foods available in the market. In addition to this cake roll, pastries, doughnuts, sugar-coated cereals, etc., becuase of their sweet and sticky nature are not supportive of Headstart dental health education and are not recommended.

4. The kinds of food served conform to minimum standards for meal patterns indicated in OCD Headstart Guidance Material.

GUIDANCE

See Section I-E of the Study Guide. (Pages 12-14)

5. The quantities of food served conform to recommended amounts indicated in OCD Headstart Guidance Material.

GUIDANCE

See Section I-E of the Study Guide. (Page 14)

6. Meal and snack periods are scheduled appropriately to meet children's needs and are posted along with menus; e.g., breakfast must be served at least 2½ hours before lunch, and snacks must be served at least 1½ hours before lunch or supper.

GUIDANCE

Quiet time should be scheduled before the meal so the children come to the table relaxed and ready to eat. Regularity in times of serving meals and snacks and the following of a daily routine help young children to establish good habits. Proper spacing of meals allows time for the child to be hungry enough to eat. Time should be allowed after meals for activities such as toothbrushing, handwashing, etc. This is especially important when the meal is served just before the children go home.

c. The plan shall undertake to ensure that the nutrition services contribute to the development and socialization of the the children by providing that:

GUIDANCE

The feeding situation should promote the physical, social, and emotional development of children. This needs to take place in a quiet, well-lighted and ventilated area.

Meal-related activities provide opportunities for decision making, learning to take responsibility, sharing, communicating with others, muscle control and eye-hand coordination. Family style food service supports these efforts.

SUPPLEMENT #5 - CONTINUED

Food-related activities should be planned from the very simple to more difficult, all within the child's range of abilities. Usually food preparation activities are coordinated with and may be carried out in the kitchens. If food is not prepared on-site, special efforts will need to be made to assure that opportunities are available for food preparation activities in the classroom. These will need to be closely coordinated with the planned menus.

1. A variety of foods which broaden the child's food experience in addition to those that consider cultural and ethnic preferences is served.

GUIDANCE

Start with familiar foods which make a child feel comfortable and promote good self-concept. Introduce new foods gradually. Offer a small amount of one new food along with a meal of familiar foods. Children should be prepared for the new food through classroom activities such as reading stories about the food, shopping for the food and helping in its preparation, growing the food or seeing it grow on a farm, etc. Snack time can be used to introduce a new food.

Explore various ways one food item is served in different cultures. For example, the many different types of breads used: tortillas, biscuits, pita (flat bread), bagels, soda bread, etc.

Explore the many ways one food can be prepared. For example: hard and soft cooked egg, fried, poached, coddled, egg salad, deviled, meringue, egg nog, etc.

2. Food is not used as punishment or reward, and that children are encouraged but not forced to eat or taste.

GUIDANCE

If a child refuses a food, offer it again at some future time, don't keep pestering the child. Forcing children to eat or using desserts or other food as reward or punishment may create problem eaters and unpleasant or undesirable associations with the food. Remember that all foods offered should contribute to the child's needs, including the dessert. "Clean plate" clubs, stars and other gimmicks to encourage children to eat are not appropriate.

3. The size and number of servings of food reflect consideration of individual children's needs.

GUIDANCE

Appetites vary among children and in the same child from day to day. Start with small portions allowing for additional portions as desired. Permitting children to serve themselves gives them latitude to make decisions on the quantity they want and prevents waste. Family style food service is preferred.

SUPPLEMENT #5 - CONTINUED

Use of pre-packaged (e.g. preplated TV type) meals is unacceptable. They allow no opportunity for individualization of serving size, and usually allow little variety, especially in cultural foods.

Serve food in a form that is easy for the young child to manage. Bite-size pieces and finger food are well liked and suitable for small hands. Meat cut in bite-size pieces, bread, and raw vegetables cut in strips and fruit in sections are easy for children to handle.

4. Sufficient time is allowed for children to eat.

GUIDANCE

Serve children as soon as they come to the table. Slow eaters should be allowed sufficient time to finish their food (about 30 minutes). If children become restless before the meal period is over allow them to get up and move around, i.e., the children can take their plate to a cleaning area away from the table when finished. A leisurely meal time pace should be encouraged.

Some handicapped children may be eating at a different developmental level than the other children. For example, if the 3 year old child is eating with skills of a 2 year old, start where the child is and plan with a nutritionist or other therapist for helping the child reach an adequate level of self-feeding skill.

5. Chairs, tables, and eating utensils are suitable for the size and developmental level of the children with special consideration for meeting the needs of children with handicapping conditions.

GUIDANCE

Heavy duty plastic dishes and stainless steel flatware are practical for use with small children. Small flat-bottom plastic glasses or cups (4 oz.) are easy to hold and help avoid spills. Small pitchers can be handled by children for refills. Forks should have broad short handles and short blunt tines. Spoons should have shallow bowls. Children need experience using knives. These should have rounded tips and short handles.

If paper plates must be used they should be of sturdy weight so that they do not slide around and so juice does not soak through the surface and make eating difficult. Paper or styrofoam tumblers are not suitable. The children squeeze the paper with obvious results of spillage and bite through the styrofoam. Disposable plastic flatware is unacceptable. It is a safety hazard and it is not conducive to development of eating skills. Most local sanitary codes should permit stainless flatware to be washed in hot soapy water, rinsed and boiled or sanitized by an approved bleach or other chemical method.

Use washable tabletops, covers or mats for easy cleaning of spills.

SUPPLEMENT #5 - CONTINUED

6. Children and staff, including volunteers, eat together sharing the same menu and a socializing experience in a relaxed atmosphere.

7. Opportunity is provided for the involvement of children in activities related to meal service. (For example: family style service)

GUIDANCE

Activities related to meal service include shopping for food, food preparation, setting the table, serving the food to others or self, cleaning up, helping the cook, making place mats and table centerpieces, etc. Children should be allowed to help with all of these activities.

d. The plan shall set forth an organized nutrition education program for staff, parents and children. This program shall assure that:

1. Meal periods and food are planned to be used as an integral part of the total education program.

GUIDANCE

Meal periods are part of the flow of the day's activities. Foods serve as objects of observation and conversation for conceptual, sensory, and vocabulary development of children. Food related activities can be used as a means for teaching language arts, color, texture, arithmetic, science, social skills and hygienic practices; however, the primary purpose of these activities is to establish long term sound food habits and attitudes, and the food should be eaten.

There also may be a special nutrition focus in the education program with carry over into the menu and meal time activities. For example, related emphasis should be placed on the fruit in the menus, meal time conversation, and classroom food preparation experiences.

2. Children participate in learning activities planned to effect the selection and enjoyment of a wide variety of nutritious foods.

GUIDANCE

Examples of learning activities are field trips, tasting parties, food preparation, planting and growing food, reading stories about food; role playing as parents, grocer, making scrap books and exhibits, feeding classroom pets, planning menus to share with parents, etc.

3. Families receive education in the selection and preparation of foods to meet family needs, guidance in home and money management and help in consumer education so that they can fulfill their major role and responsibility for the nutritional health of the family.

GUIDANCE

Staff should talk with parents to identify nutrition information and food needs and develop the plan in response to their specific needs. "Education" may mean organizing food co-ops, group gardens, transportation systems and other activities that contirubte to meeting the needs. Parents have much to offer each other.

SUPPLEMENT #5 - CONTINUED

Many ways can be used for parent involvement in education such as formal and informal presentations, individual counseling by nutritionist, nurse and other staff, attendance at local adult education programs and cook training sessions. Also, parents can participate in menu planning committees and staff can distribute pamphlets, newsletters and employ audio-visual aids.

4. All staff, including administrative, receive education in principles of nutrition and their application to child development and family health, and ways to create a good physical, social and emotional environment which supports and promotes development of sound food habits and their role in helping the child and family to achieve adequate nutrition.

GUIDANCE

This education must be appropriate to the specific nutrition-related responsibilities of each staff member. For example, nutrition education for the classroom staff should have a different focus from that of the food service staff or that of the director. The staff training program should be coordinated and integrated with the total staff training and orientation program.

e. The plan shall make special provisions for the involvement of parents and appropriate community agencies in planning, implementing, and evaluating the nutrition services. It shall provide that:

GUIDANCE

Parents should be encouraged to participate in nutrition program activities such as planning menus and working in classroom nutrition activities, to serve as volunteers or in jobs in food service and in on-going monitoring of the nutrition component.

Parents or members of the community who meet the following requirements should be encouraged to apply for food service positions:

- know how to prepare good food
- are willing to try out new foods
- meet health standards
- have good attitudes toward food
- like being and working with and around children
- are eager and flexible to learn the necessary competencies to carry out the functions required.

Appropriate agencies can provide professional input and are resources for training teachers, staff and food service personnel as well as meeting needs of parents. It is important that these agencies understand the Headstart philosophy. Some agencies may be resources for additional funding for equipment, food, etc. Examples are local health

SUPPLEMENT #5 - CONTINUED

departments, hospitals, schools, colleges, county extension service, professional and trade organizations (The American Dietetic Association, Dairy Council, Home Economics Association, etc).

1. The Policy Council or Committee and the Health Services Advisory Committee have opportunity to review and comment on the nutrition services.

2. The nutritional status of the children will be discussed with their parents.

GUIDANCE

Any problem related to nutritional status as indentified in (a) (1) and (2) and by teachers observations of feeding skills and habits should be discussed with parents. A plan to solve the problems should be discussed with parents. A plan to solve the problems should be developed with the parents. Opportunity should be taken to reinforce the positive food habits and good growth pattern of the child.

3. Information about menus and nutrition activities will be shared regularly with parents.

GUIDANCE

Information can be shared by sending menus to the home, periodic group meetings, parent-staff discussions, home visits, and periodic newsletters. Frequency of these activities will vary from agency to agency.

4. Parents are informed of the benefits of food assistance programs.

GUIDANCE

Food assistance programs include food stamps, free or reduced price school breakfast, lunch, and food programs for high risk categories (pregnant mothers, infants, children, the elderly). Contact USDA Food and Nutrition Service for materials and information on these programs.

Food and Nutrition Service
U.S. Department of Agriculture
500 12th Street, S.W.
Washington, D.C. 20250

5. Community agencies are enlisted to assist eligible families participate in food assistance programs.

GUIDANCE

It is important to assure that families have food. This may involve utilization of emergency food banks, providing transportation to buy food stamps or food, etc.; but it should be remembered that the long term goal is to help families become independent. Work with the social service component on this.

SUPPLEMENT #5 - CONTINUED

f. The plan shall provide for compliance with applicable local, State and Federal sanitation laws and regulations for food service operations including standards for storage, preparation and service of food, and health of food handlers, and for posting of evidence of such compliance. The plan shall provide, also, that vendors and caterers supplying food and beverages comply with similar applicable laws and regulations.

GUIDANCE

These are established to protect the health and safety of children being fed.

All food service personnel should possess a Health Card or Statement of Health from the local Health Department or physician.

Local or State sanitarians in health agencies can be most helpful in providing ideas on ways to meet sanitation standards.

Evidence must be available that food caterers have met codes. Vehicles used for transporting and holding food must be insulated so food meets temperature standards and transportation equipment must be able to be sanitized.

g. The plan shall provide for direction of the nutrition services by a qualified full-time staff nutritionist or for periodic and regularly scheduled supervision by a qualified nutritionist or dietitian as defined in the Headstart Guidance Material. Also, the plan shall provide that all nutrition services staff will receive preservice and in-service training as neccessary to demonstrate and maintain proficiency in menu planning, food purchasing, food preparation and storage, and sanitation and personal hygiene.

h. The plan shall provide for the establishment and maintenance of records covering the nutrition services budget, expenditures for food, menus utilized, numbers and types of meals served daily with separate recordings for children and adults, inspection reports made by health authorities, recipes and any other information deemed necessary for efficient operation.

SUPPLEMENT #6 - EVALUATION OF HEIGHTS AND WEIGHTS

Headstart Performance Standards require that heights and weights be recorded for all Headstart participants 3 times a year.

Height and Weight are both indicators of good health and nutritional status. It is very important that height and weight measurements be done correctly (accurately).

The following procedure should be used to measure heights and weights:

HEIGHT AND WEIGHT DATA

1. To be done 3 times a year:

   a. At beginning of year or at initial enrollment

   b. Mid-term (after Christmas)

   c. At end of year or when child ends enrollment

2. To measure height -

   a. Measuring tape should be securely fastened to wall and remain in the same place permanently, if possible. It should be placed against a wall and flush with the floor.

   b. To measure child - remove shoes, stand child with back to wall. Have child stand straight and look directly forward, not up or down. Place ruler on child's head and level with floor.

   c. Record measurement immediately. Record to the nearest ¼ of an inch. Example - 48 3/4 inches.

3. To weigh -

   a. Make sure your scale is zeroed. Weigh an object on a scale that you know is correct, then weigh on your scale and adjust if necessary. This should be done before weighing anyone.

   b. Have child remove shoes and step on middle of scale. Make sure feet are completely on the scale. Take measurement to the nearest ½ pound. Record immediately. Example - 35½ lb.

It is important to look at the height and weight data that is collected. The intern should look at the data in two specific ways. The Growth Standards for Screening charts are from the Center for Disease Control, Atlanta, Georgia.

Height for age - This is a measure of tallness and shortness. This is the best indicator of long-term undernutrition, if it has been of sufficient severity and duration to have caused stunting of growth. Shortness is cause for concern because of possible malnutrition. Shortness may also be hereditary if nutrition is not a problem, i.e., if both parents and grandparents are short and there is no nutrition problem, then the child may be considered normally short. Use the chart titled Height for Age to determine problems.

SUPPLEMENT #6 - EVALUATION OF HEIGHTS AND WEIGHTS - CONTINUED

To use this chart, first determine the child's age to the nearest month (from birthdate.) Find the child's age on the chart. Next to his age in the column labeled "Short for age if height in inches is less than" you will find a number. If the child's height in inches is less than this number, then there is a possible problem. Any question or possible problem should be referred to the CDA advisor, public health nurse, public health service, nutritionist, or physician.

Example: A child's birthdate is November 19, 1970. The child (female) is 4 years and 10 months old in September, 1975. The height listed in the 2nd column is 40 inches. The child's height is 41½ inches so she does not have a problem.

Age		Short for age if height in inches is less then
Years	Months	
4	9	40
4	10	40
4	11	40

Weight for height - This is an excellent tool to indicate recent undernutrition (underweight) or overnutrition (overweight). It cannot indicate whether a person is too short or not.

Use the chart titled Weight For Height Table. To use: first accurately determine the child's height and weight. Find the child's height in inches in the column labeled "Height in Inches". Look directly to the right and compare the child's weight with the numbers in the two columns.

Example: A child's (male) height is 41 inches and his weight is 44½ lbs. The child is not underweight because he weighs more than 32 lbs. The child is overweight because he weighs more than 42 lbs.

Height in Inches	Underweight if weight in pounds is less than	Overweight if weight in pounds is more than
40	31	40
41	32	42
42	34	44

Again, any child with a suspected problem should be referred to the proper person for further investigation.

AGE		Short* for age if height in inches is less than	AGE		Short* for age if height in inches is less than	AGE		Short* for age if height in inches is less than
Years	Months		Years	Months		Years	Months	
0	0	18	6	0	42	12	0	56
0	1	20	6	1	43	12	1	56
0	2	21	6	2	43	12	2	56
0	3	22	6	3	43	12	3	57
0	4	23	6	4	43	12	4	57
0	5	24	6	5	43	12	5	57
0	6	25	6	6	44	12	6	57
0	7	25	6	7	44	12	7	57
0	8	26	6	8	44	12	8	58
0	9	26	6	9	44	12	9	58
0	10	27	6	10	44	12	10	58
0	11	27	6	11	44	12	11	58
1	0	28	7	0	45	13	0	58
1	1	28	7	1	45	13	1	58
1	2	29	7	2	45	13	2	59
1	3	29	7	3	45	13	3	59
1	4	30	7	4	45	13	4	59
1	5	30	7	5	45	13	5	59
1	6	30	7	6	46	13	6	59
1	7	31	7	7	46	13	7	59
1	8	31	7	8	46	13	8	59
1	9	31	7	9	46	13	9	59
1	10	32	7	10	46	13	10	60
1	11	32	7	11	47	13	11	60
2	0	32	8	0	47	14	0	60
2	1	32	8	1	47	14	1	60
2	2	33	8	2	47	14	2	60
2	3	33	8	3	47	14	3	60
2	4	33	8	4	47	14	4	60
2	5	33	8	5	48	14	5	60
2	6	34	8	6	48	14	6	60
2	7	34	8	7	48	14	7	60
2	8	34	8	8	48	14	8	60
2	9	34	8	9	48	14	9	60
2	10	35	8	10	49	14	10	61
2	11	35	8	11	49	14	11	61
3	0	35	9	0	49	15	0	61
3	1	35	9	1	49	15	1	61
3	2	36	9	2	49	15	2	61
3	3	36	9	3	49	15	3	61
3	4	36	9	4	50	15	4	61
3	5	36	9	5	50	15	5	61
3	6	36	9	6	50	15	6	61
3	7	37	9	7	50	15	7	61
3	8	37	9	8	50	15	8	61
3	9	37	9	9	51	15	9	61
3	10	37	9	10	51	15	10	61
3	11	38	9	11	51	15	11	61
4	0	38	10	0	51	16	0	61
4	1	38	10	1	51	16	1	61
4	2	38	10	2	51	16	2	61
4	3	38	10	3	52	16	3	61
4	4	39	10	4	52	16	4	61
4	5	39	10	5	52	16	5	61
4	6	39	10	6	52	16	6	61
4	7	39	10	7	52	16	7	61
4	8	39	10	8	53	16	8	61
4	9	40	10	9	53	16	9	61
4	10	40	10	10	53	16	10	61
4	11	40	10	11	53	16	11	61
5	0	40	11	0	53	17	0	61
5	1	40	11	1	54	17	1	61
5	2	41	11	2	54	17	2	61
5	3	41	11	3	54	17	3	61
5	4	41	11	4	54	17	4	61
5	5	41	11	5	54	17	5	61
5	6	41	11	6	55	17	6	61
5	7	42	11	7	55	17	7	61
5	8	42	11	8	55	17	8	61
5	9	42	11	9	55	17	9	61
5	10	42	11	10	56	17	10	61
5	11	42	11	11	56	17	11	61
						18	0	61

AGE		Short* for age if height in inches is less than	AGE		Short* for age if height in inches is less than	AGE		Short* for age if height in inches is less than
Years	Months		Years	Months		Years	Months	
0	0	18	6	0	43	12	0	55
0	1	20	6	1	43	12	1	55
0	2	22	6	2	43	12	2	55
0	3	23	6	3	44	12	3	55
0	4	24	6	4	44	12	4	56
0	5	25	6	5	44	12	5	56
0	6	25	6	6	44	12	6	56
0	7	26	6	7	44	12	7	56
0	8	27	6	8	44	12	8	56
0	9	27	6	9	45	12	9	57
0	10	28	6	10	45	12	10	57
0	11	28	6	11	45	12	11	57
1	0	29	7	0	45	13	0	57
1	1	29	7	1	45	13	1	57
1	2	29	7	2	45	13	2	58
1	3	30	7	3	46	13	3	58
1	4	30	7	4	46	13	4	58
1	5	30	7	5	46	13	5	58
1	6	31	7	6	46	13	6	58
1	7	31	7	7	46	13	7	59
1	8	31	7	8	46	13	8	59
1	9	32	7	9	47	13	9	59
1	10	32	7	10	47	13	10	59
1	11	32	7	11	47	13	11	59
2	0	32	8	0	47	14	0	60
2	1	33	8	1	47	14	1	60
2	2	33	8	2	47	14	2	60
2	3	33	8	3	48	14	3	60
2	4	34	8	4	48	14	4	61
2	5	34	8	5	48	14	5	61
2	6	34	8	6	48	14	6	61
2	7	34	8	7	48	14	7	61
2	8	35	8	8	48	14	8	61
2	9	35	8	9	49	14	9	62
2	10	35	8	10	49	14	10	62
2	11	35	8	11	49	14	11	62
3	0	36	9	0	49	15	0	62
3	1	36	9	1	49	15	1	63
3	2	36	9	2	49	15	2	63
3	3	36	9	3	49	15	3	63
3	4	37	9	4	50	15	4	63
3	5	37	9	5	50	15	5	63
3	6	37	9	6	50	15	6	64
3	7	37	9	7	50	15	7	64
3	8	37	9	8	50	15	8	64
3	9	38	9	9	50	15	9	64
3	10	38	9	10	51	15	10	64
3	11	38	9	11	51	15	11	64
4	0	38	10	0	51	16	0	65
4	1	39	10	1	51	16	1	65
4	2	39	10	2	51	16	2	65
4	3	39	10	3	51	16	3	65
4	4	39	10	4	52	16	4	65
4	5	39	10	5	52	16	5	65
4	6	40	10	6	52	16	6	65
4	7	40	10	7	52	16	7	65
4	8	40	10	8	52	16	8	65
4	9	40	10	9	52	16	9	66
4	10	40	10	10	53	16	10	66
4	11	41	10	11	53	16	11	66
5	0	41	11	0	53	17	0	66
5	1	41	11	1	53	17	1	66
5	2	41	11	2	53	17	2	66
5	3	41	11	3	53	17	3	66
5	4	42	11	4	54	17	4	66
5	5	42	11	5	54	17	5	66
5	6	42	11	6	54	17	6	66
5	7	42	11	7	54	17	7	66
5	8	42	11	8	54	17	8	66
5	9	42	11	9	54	17	9	66
5	10	43	11	10	55	17	10	66
5	11	43	11	11	55	17	11	66
						18	0	66

* Less than 10th percentile height for age.

DHS/N-60 (8-78)

CHART FOR
#6

GROWTH STANDARDS FOR SCREENING

WEIGHT FOR HEIGHT TABLE

Girls

Height in Inches	Underweight* If weight in pounds is less than	Overweight† If weight in lbs. is greater than
19	5	8
20	6	9
21	7	10
22	8	11
23	9	13
24	11	15
25	12	16
26	13	18
27	15	20
28	16	21
29	18	23
30	19	24
31	20	26
32	21	27
33	22	29
34	23	30
35	24	31
36	25	33
37	26	35
38	28	37
39	29	39
40	30	41
41	31	43
42	33	46
43	35	48
44	36	50
45	38	52
46	40	55
47	42	59
48	44	61
49	46	65
50	48	69
51	50	74
52	53	79
53	55	84
54	59	91
55	61	96
56	64	103
57	67	109
58	71	116
59	74	123
60	79	130

Boys

Height in Inches	Underweight* If weight in pounds is less than	Overweight† If weight in lbs. is greater than
19	6	8
20	6	9
21	7	10
22	8	12
23	9	13
24	11	15
25	12	17
26	14	18
27	15	20
28	17	22
29	18	23
30	19	25
31	21	26
32	22	28
33	23	29
34	24	31
35	25	32
36	26	34
37	28	35
38	29	37
39	30	39
40	31	40
41	32	42
42	34	44
43	36	46
44	37	49
45	39	51
46	40	53
47	42	56
48	44	59
49	46	62
50	49	66
51	51	70
52	54	75
53	56	79
54	59	86
55	62	91
56	65	97
57	68	103
58	71	109
59	74	116
60	77	123

* Less than 10th percentile weight for height.

† Greater than 94th percentile weight for height.

SUPPLEMENT #7 - BOOKS, FILMSTRIPS, AND FILMS FOR CHILDREN

BOOKS

A TREE IS NICE, Janice May Udry, Harper and Row Publishers, New York, New York, 1956.

BITS THAT GROW BIG - THE STORY OF PLANT REPRODUCTION, Irma E. Webber, William R. Scott, Inc., New York, New York, 1949.

BROWN COW FARM, Dahlov Ipcar, Doubleday and Co., New York, New York, 1959.

EVERYBODY EATS, Mary McBurney Green, William R. Scott, Inc., New York, New York, 1961.

GOOD MORNING FARM, Betty Ren Wright, Whitman Publishing Co., Racine, Wisconsin, 1964.

MY GARDEN GROWS, Adrian Watson, The Viking Press, New York, New York, 1947.

NIBBLE, NIBBLE, Margaret Wise Brown, William R. Scott, Inc., New York, New York, 1959.

SEEDS AND MORE SEEDS, Millicent Selsam, Harper and Row Publishers, New York, New York, 1959.

UP ABOVE AND DOWN BELOW, Irma E. Webber, William R. Scott, Inc., New York, New York.

The following books are available from Inquiry Department, Scholastic Magazines, 904 Sylvan Avenue, Englewood Cliffs, New Jersey 07632:

BREAD AND JAM FOR FRANCES by Hoban. 50¢

THE CARROT SEED by Krauss. 35¢

CHICKEN SOUP WITH RICE by Sendak. 75¢

THE MAN WHO DIDN'T WASH HIS DISHES by Krasilosksy. 50¢

THE PLANT SITTER by Zion. 75¢

STONE SOUP by McGovern. 60¢

WHAT'S FOR LUNCH, CHARLEY by Hodges. 60¢

Available from Yakima Home Economics Association, Box 2424, Yakima, Washington 98902: (50¢ per copy)

KIM LIKES TO EAT

FOOD HELPS KIM GROW

KIM REMEMBERS TO WASH

SUPPLEMENT #7 - BOOKS, FILMSTRIPS, AND FILMS FOR CHILDREN - CONTINUED

FILMS AND FILMSTRIPS

The following films and filmstrips are available from the Film Library, Arizona State Department of Health.

Dental Health

THE SHOW THAT ALMOST WASN'T - Color - 14½ min. - pr

A Headstart class has a TV appearance cancelled because a youngster has a toothache. How to care for teeth and prevent cavities is discussed. (1968)

THE DOUBLE DAY OF DANNY DILLON - Color - 15 min. - p, el, jh

An amusing story of Danny Dillon and his visit to the dentist. His dentist points out many ways he can care for his teeth all day long. Going back through his day, fast motion and backwards, we follow his activities from the time he enters the dentist's office until he gets out of bed in the morning. Then, starting at the beginning, the dentist points out his mistakes in caring for his teeth and gives him suggestions for improvement. (1966)

TEETH ARE TO KEEP - Color - 11 min. - p, el

Stresses the elements of teeth care in an animated cartoon style suitable for young children. Strong motivation for proper care of the teeth is built into the film. (1950)

TODAY ALICE IS THREE - Color - 17 min. - ad

Alice gets acquainted with the dentist on her third birthday. A parent education film answering the question: Why take Alice to the dentist at the age of three? (1965)

WINKY THE WATCHMAN - Color - 12 min. - p, el, jh

Animated cartoon stresses the importance of regular visits to the dentist. Guarding a city (set of teeth) is Winky's task but he falls asleep on the job. The resulting experience makes him aware that he must be on guard always. (1946)

MICHAEL LIKES GOOD FOOD - Color - 15 min. - presc., p

To promote good eating habits desirable for good dental health.

PEDRO AND THE DENTIST and PEDRO LEARNS TO BRUSH HIS TEETH (Spanish and English) Color - 15 min. - presc., p

Preparing child for first dental visit and orienting the young child to a method of tooth brushing.

SUPPLEMENT #7 - BOOKS, FILMSTRIPS, AND FILMS FOR CHILDREN - CONTINUED

Family Life and Education

THE STORY OF BIRTH - Color - 53 frames - p, el

Paper sculpture figures are used to present birth as a natural and happy occasion. Filmstrip and record.

Miscellaneous

THE MARVELOUS PEANUT - Color

Describes growing and processing of peanuts and their importance as a basic food. Filmstrip and record.

Nutrition

BIG DINNER TABLE - Color - 12 min. - p

To introduce primary grade children to the fundamental concept of nutrition, the film features children the world over eating various foods at family mealtime. The film's intention is to explain the body's need for food and to present the four food groups as an enjoyable and reliable eating pattern. Because of its international scope, the film offers students an interesting perspective on different foods in different parts of the world as well as an important lesson in sensible eating habits. (1968)

GOOD EATING HABITS - Black and White - 10 min. - p, el

Youngsters learn by this film the proper way to eat. They see how important it is to eat slowly, chew food thoroughly, avoid excessive sweet food. They learn they should eat what is served them at mealtime and also are shown how improper eating can make them ill. (1953)

STANLEY TAKES A TRIP - Color - 10 min. - p, el

The story of a balanced diet is told in cartoons for children. (1947)

TWO LITTLE RATS AND HOW THEY GREW - Color - 11 min. - p, el

The film shows a fifth grade class conducting a rat feeding demonstration under the direction of the school nurse and teacher. Also emphasized are properly prepared school lunches and balanced family meals. (1961)

YOUR FOOD - Black and White - 7 min. - p

Youngsters are shown what happens to their food after it enters the digestive system. The relation of this to other body systems is explained and balanced diets are demonstrated. (1964)

Personal Health

SUSAN AND PETER VISIT GRANDFATHER'S FARM

Susan and Peter travel to the farm where their height and weight at the beginning of the summer are checked. During the course of the summer they learn to eat correct foods, drink pure water and milk, exercise and work enough and rest and play sufficiently. Consequently, they gain in height and weight.

SUPPLEMENT #8 - GLOSSARY

Antibody

A complex substance (protein) produced by the body which combats disease and infection.

Carbohydrate

A substance made of the elements of carbon, hydrogen, and oxygen which is broken down by the body to provide energy.

Enzyme

A substance made of protein which controls a process that keeps the body working.

Hemoglobin

A molecule made of iron and protein found in red blood cells. This is the part of the red blood cell which carries oxygen.

Mucous membrane

The thin membrane or tissue lining the nasal passages and mouth and throat.

Nutrient

A substance(s) found in food that is necessary for life. Like protein, carbohydrates, vitamins, etc.

Nutrition

The study of how the body uses food.